

In any event, it is not agreed that the claim language does read upon this reference and particularly FIG. 2 thereof because the claim language calls for the relationship of the wound cores and that no two wound cores of any groups are adjacent to each other. As clearly seen in FIG. 2 of the Kordik reference, the wound cores 66 and 65 are adjacent to each other as is true with all of the wound cores in this reference. Thus, the reference teaches the use of salient poles between the wound cores and not the utilization of wound cores that are separated by wound cores of another group. This feature has been further emphasized in the claim language applied in new Claims 13 and 14.

The secondary reference, Suzuki, which has been relied upon by the Examiner does not offset the deficiencies of Kordik. Suzuki is directed toward reducing cogging torque, a feature of Applicants' invention, whereas the Kordik reference is directed toward providing an arrangement that does not have a zero torque or detent position so that the machine will be self-starting.

In support of Applicants' priority claim made in the declaration of this application, enclosed herewith are certified copies of Japanese Applications 2000-387361, filed December 20, 2000 and 2001-344656, filed November 9, 2001. Pursuant to the provisions of 35 U.S.C. 119, please enter these into the file.

Favorable action is most courteously solicited.

Respectfully submitted,



Ernest A. Beutler
Registration No: 19901
500 Newport Center Drive
Suite 945
Newport Beach, Ca 92660
(949) 717-4821 Pacific Time

VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS

1. (Amended) A permanent magnet [type] rotary electric machine having a rotor and a stator, one of said rotor and said stator comprising a plurality of permanent magnets disposed such that polarities of adjacent magnets are different from each other, the other of said rotor and said stator comprising a plurality of electrical coils wound around cores juxtaposed to said permanent magnets for cooperation therewith, said coil windings being arranged in groups of coil windings, the coil windings of said groups having their windings connected to each other [with] and common ends, no two coil windings of each group being circumferentially adjacent to the other.

2. (Amended) A permanent magnet [type] rotary electric machine [having a rotor and a stator, one of said rotor and said stator comprising a plurality of permanent magnet disposed such that polarities of adjacent magnets are different from each other, the other of said rotor and said stator comprising a plurality of electrical coils wound around cores juxtaposed to said permanent magnets for cooperation therewith,] as set forth in claim 1 wherein one of [said] the cores and [said] the permanent magnets [being] are disposed in nonsymmetrical relation to the axis of rotation of said [stator] machine.

4. (Amended) A permanent magnet [type] rotary electric machine as set forth in claim 2 wherein all the permanent magnets are of substantially of the same shape a circumferential offset angle of each permanent magnet from a regularly disposed position is set such that a cogging number per rotation of the rotor is equivalent to as the least common multiple of the number S of slots between the electrical winding cores and the number P of magnetic poles.

5. (Amended) A [The] permanent magnet [type] rotary electric machine as set forth in claim 2, wherein the magnitude of the torque exerted on each permanent magnet is determined separately by a computer numerical analysis and peaks or bottoms of the torque curves of said permanent magnets are offset from each other with respect to the rotation angle of the rotor so that the cogging number is increased.

7. (Amended) A [The] permanent magnet [type] rotary electric machine as set forth in claim 4, wherein the number S of slots is eighteen, the number P of magnetic poles is twelve, and the twelve permanent magnets are divided into four sets, each set comprising three circumferentially adjacent permanent magnets, the circumferential pitch angle of the three permanent magnets of each set is 26.7°, and the circumferential pitch angle of adjacent two permanent magnets between the sets is 36.60°.

9. (Amended) A [The] permanent magnet [type] rotary electric machine as set forth in claim 4, wherein the number S of slots is eighteen, the number P of magnetic poles is twelve, and the twelve permanent magnets are divided into four sets, two of said four sets comprising three circumferentially adjacent permanent magnets, the circumferential pitch angle of the three permanent magnets of each set is 26.7° , and the circumferential pitch angle of permanent magnets within the other two sets disposed at a symmetrical position is 33.3° .

11. (Amended) A [The] permanent magnet [type] rotary electric machine as set forth in claim 4, wherein the number S of slots is eighteen, the number P of magnetic poles is twelve, and the twelve permanent magnets are divided into four sets of three circumferentially adjacent permanent magnets, the circumferential pitch angle of the three permanent magnets of each set is 28.3° , and circumferential pitch angles of adjacent permanent magnets between adjacent different sets are set to 33.3° , 28.3° , 33.3° and 28.3° circumferentially in this order.

13. (New) A permanent magnet rotary electric machine as set forth in claim 1 wherein the coil windings of each group are circumferentially separated from each other by at least one coil winding of another group.

14. (New) A permanent magnet rotary electric machine as set forth in claim 1 wherein coil windings are formed around each of the cores.